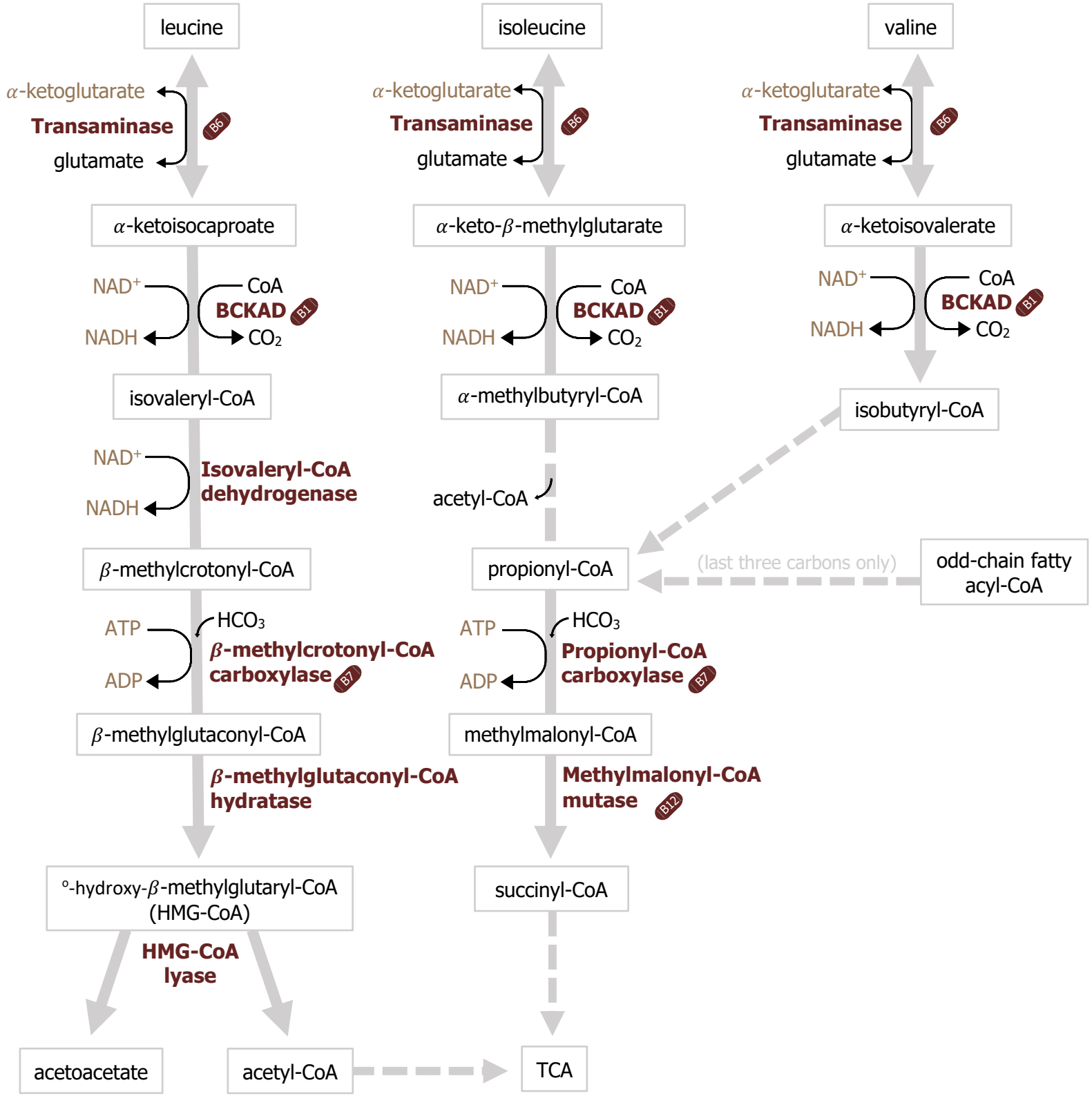
leucine
α-ketoglutarate
Transaminase
B6
glutamate
α-ketoisocaproate
NAD+
NADH
CoA
BCKAD
B1
CO2
isovaleryl-CoA
NAD+
NADH
Isovaleryl-CoA dehydrogenase
β-methylcrotonyl-CoA
ATP
ADP
HCO3
β-methylcrotonyl-CoA carboxylase
B7
β-methylglutaconyl-CoA
β-methylglutaconyl-CoA hydratase
°-hydroxy-β-methylglutaryl-CoA (HMG-CoA)
HMG-CoA lyase
acetoacetate
acetyl-CoA
isoleucine
α-ketoglutarate
Transaminase
B6
glutamate
α-keto-β-methylglutarate
NAD+
NADH
CoA
BCKAD
B1
CO2
α-methylbutyryl-CoA
acetyl-CoA
propionyl-CoA
ATP
ADP
HCO3
Propionyl-CoA carboxylase
B7
methylmalonyl-CoA
Methylmalonyl-CoA mutase
B12
succinyl-CoA
TCA
valine
α-ketoglutarate
Transaminase
B6
glutamate
α-ketoisovalerate
NAD+
NADH
CoA
BCKAD
B1
CO2
isobutyryl-CoA
(last three carbons only)
odd-chain fatty acyl-CoA